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FIGURE 6 shows a flow diagram of a CMTS Channel Change Procedure 600 in accordance with a specific embodiment of the present invention.

FIGURE 7 shows a flow diagram of a Cable Modem Channel Change Procedure 700 in accordance with a specific embodiment of the present invention.

5 FIGURE 8 shows a block diagram of a Cable Modem Termination System (CMTS) which may be used for implementing the technique of the present invention.

FIGURE 9 shows a block diagram of wireless network which may be used for implementing the technique of the present invention.

10 FIGURE 10 shows a block diagram of a specific embodiment of a Cable Modem Termination System (CMTS) 1000 which may be implemented using the technique of the present invention.

FIGURE 11A shows a block diagram of a Dynamic Channel Change Request (DCC-REQ) message in accordance with a specific embodiment of the present invention.

15 FIGURE 11B shows a block diagram of a Dynamic Channel Change Response (DCC-RSP) message in accordance with a specific embodiment of the present invention.

FIGURE 12 show an example of a data flow diagram illustrating how the technique of the present invention may be implemented in a cable network.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

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As described previously, each DOCSIS domain of a conventional HFC network typically includes multiple upstream channels, each upstream channel being associated with a different timeslot. In order to allow the cable modems of a particular domain to communicate effectively with the CMTS, the standard DOCSIS protocol includes provisions for enabling a cable modem of a selected domain to switch between upstream channels within the selected domain. Thus, as shown in FIGURE 2, for example, if it is assumed that cable modem CM1 261 is currently transmitting data to the CMTS 210 via upstream channel f_{U1} , the CMTS 210 may use the DOCSIS protocol to instruct cable modem CM1 261 to begin transmitting its data to the CMTS via upstream channel f_{U2} (rather than f_{U1}). However, since most conventional DOCSIS domain implementations include only one downstream channel, there is currently no provision in the DOCSIS protocol for enabling a cable modem to switch between downstream channels in the HFC network. Moreover, as described in greater detail below, the lack of downstream channel change capability in HFC or other access networks limits the functionality such networks

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